

## REMARKS

### I. Introduction

The Current Action allows claims 38-53, but rejects claims 1, 3-6, 8-13, 15-22, 24-27, and 29-37 under 35 U.S.C. § 103(a). The Applicant respectfully asserts that the arguments herein fully traverse all rejections of record and respectfully asks the Examiner to withdraw the rejections. Claims 2, 7, 14, 23, and 28 were previously canceled and claims 1, 3-6, 8-13, 15-22, 24-27, and 38-53 remain pending in the present application

### II. Arguments

Claims 1, 3-6, 8-13, 15-22, 24-27, and 29-37 are rejected as obvious in light of Caporizzo et al., U.S. Patent No. 6,014,547 (hereinafter *Caporizzo*) and Ciccarelli et al, U.S. Patent No. 6,498,962 (hereinafter *Ciccarelli*). The Applicant respectfully asserts, however, that the Current Action has failed to establish a prima facie case for rejecting these claims.

In order to establish a prima facie case of obviousness, a rejection must meet three basic criteria, see M.P.E.P. § 2143. First, it must cite some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, the proposed combination or modification must have had some reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the limitations found in the rejected claims. Without conceding the second criteria, the Applicant again respectfully asserts that the Examiner has failed to indicate a proper motivation for combining of *Caporizzo* and *Ciccarelli*. Further, the Applicant asserts that even if combined as the Examiner proposes, the combination of applied art fails to teach or suggest all of the limitations in the rejected claims.

#### A. No Motivation Exists For the Proposed Combination

Even if the limitations of the rejected claims could be pieced together from the teachings of the cited references, the Applicant respectfully submits that no motivation exists for combining *Caporizzo* and *Ciccarelli* in the manner proposed by the Current Action. The Examiner describes *Caporizzo* as extracting specific signals from a set of input signals, using

a determining means to measure characteristics of those signals, and using that analysis to change some desirable tuner operating statistics. To meet the limitations of the rejected claims, the Current Action proposes combining these teachings with those of *Ciccarelli*. In support of this combination, the Examiner contends:

[I]t would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine *Caporizzo* and *Ciccarelli* in controlling power consumption to reduce power consumption, as taught by *Ciccarelli*, in order to avoid the degradation of non-linear input signal received by the tuner.

See Current Action at 3. However, this appears to misinterpret the disclosure of *Ciccarelli*, which adjusts performance parameters of a linear receiver in response to the measured non-linearity. The linearity measured by *Ciccarelli* is a characteristic of the receiver's output, and it is this output-based analysis that is the basis for altering the performance characteristics of the receiver's components. *Caporizzo*, in contrast, is relied upon to teach tuner adjustment based on an analysis of input signals. No motivation is provided in either reference that leads to combining the output-based adjustments of *Ciccarelli* with the input-based adjustments of *Caporizzo*. Moreover, there must be a reasonable expectation of success for this combination, and one of ordinary skill in the art could not combine *Caporizzo* and *Ciccarelli* to arrive at the invention of the pending claims without undue experimentation. Thus, no motivation exists for the Examiner's proposed combination, and, because the Current action uses the same rationale for rejecting all claims, the Current Action has failed to establish a prima facie case for rejecting any of claims 1, 3-6, 8-13, 15-22, 24-27, and 29-37. The Applicant respectfully asks the Examiner to withdraw the 35 U.S.C. § 103(a) rejections of record.

**B. The Proposed Combination Does not Teach or Suggest All of the Limitations in the Rejected Claims**

Even if motivation for combining *Caporizzo* and *Ciccarelli* could be found, however, the combination of their teachings still does not teach or suggest all of the limitations of the rejected claims.

## 1. Independent claims 1 and 32

Claim 1 recites:

means for determining from a measurement of the measurable characteristics which are present in a particular set of signals input to said tuner certain tuner operating characteristics; and  
means operable under control of said determining means for . . . changing power consumption levels with respect to certain of said tuner components to meet desired tuner output characteristics when processing said specific signals . . . .

Accordingly, the invention of claim 1 provides for changing power consumption levels with respect to certain of the tuner components, to meet desired tuner output characteristics when processing specific signals, under control of a means for determining those tuner operating characteristics from measurements of signals input to the tuner.

In the Current Action, the Examiner attempts to meet these limitations by combining *Caporizzo* with the teachings of *Ciccarelli*. Without conceding that the descriptions in the Current Action represent an accurate assessment of either references' teachings, the Applicant respectfully submits that the modifications proposed by the Current Action would still not change power consumption levels in response to measurements of the input signals. The Current Action relies on *Caporizzo* to teach tuner characteristics using an input-based analysis, and relies on *Ciccarelli* to teach an adjustment in power consumption levels. However, the adjustments of *Ciccarelli* can not be added to the analysis of *Caporizzo* as the Current Action proposes. *Ciccarelli* makes system performance alterations based on a linearity measurement of the output signal. See *Ciccarelli* at Abstract line 4. Specifically, *Ciccarelli* measures the RSSI slope of the output signal, and if analysis determines that the output of the linear receiver is amenable, the receiver can lower the IIP3 requirements while still maintaining an appropriate RSSI slope for the output signal. However, these adjustments can only be performed within an analysis that is output-based, thus these adjustments can not be simply combined with an analysis that is input-based. Making such a combination does not result in the device of claim 1, but rather produces a device that adjusts performance characteristics through an output based analysis while adjusting other characteristics through an input-based analysis. Since the proposed combination can not meet the limitations of

claim 1, the Current Action has failed to establish a prima facie case for its rejection. The Applicant respectfully asks the Examiner to withdraw this rejection.

Claim 32 recites:

determination circuitry for identifying which signal set is being processed at a point in time and determining an appropriate power level for each of a plurality of tuner components of said tuner for processing said signal set; and adjustment circuitry operable in cooperation with said determination circuitry for implementing said power levels with respect to said tuner components in accordance with the signal set then being processed.

Accordingly, the invention of claim 32 provides for determining appropriate power levels for a plurality of tuner components, cooperating with signal set identifying circuitry, for processing an identified set of signals. In an attempt to meet these limitations, the Current Action combines *Caporizzo* with *Ciccarelli*. Without conceding that the Current Action's descriptions represent an accurate assessment of either references' teachings, combining them in the manner proposed would not determine an appropriate power level for tuner components based upon an identification of signals being processed. *Caporizzo* is relied on to adjust tuner characteristics using signals being processed. *Ciccarelli* is relied on to adjust power consumption levels, but does so, not through an analysis of the signals being processed, but through an analysis of the signals being outputted. As demonstrated above, the adjustments of *Ciccarelli* can not be made based upon the analysis performed by *Caporizzo*, thus the Examiner's proposed combination would not produce a device that meets the limitations of claim 32. Therefore, the Current Action fails to establish a prima facie case, and the Applicant respectfully asks the Examiner to withdraw this rejection.

## 2. The Rejection of Claims 6, 9, 18, and 26

The Applicant respectfully submits that the combination of *Caporizzo* and *Ciccarelli* does not teach or suggest all of the limitations of claims 6, 9, 18, and 26 either.

Specifically, Claim 6 recites:

assessing . . . the incoming signal environment . . . ;  
based upon said assessed incoming signal environment  
selecting an operating level for said tuner, wherein said

selecting step includes the step of selecting an optimum power consumption level for said tuner . . . .

Accordingly, the invention of claim 6 provides for selecting an optimum power consumption level for the tuner based upon an assessed incoming signal environment. As demonstrated with respect to claim 1, the combination proposed by the Examiner does not result in selecting power consumption levels based upon incoming signals, but, rather, results in adjusting performance characteristics through an output based analysis while adjusting other characteristics through an input-based analysis. Thus the combination does not teach or suggest selecting step includes the step of selecting an optimum power consumption level for said tuner based upon the incoming signal environment. Because it does not, the Current Action fails to establish a prima facie case for rejecting claim 6, and the Applicant respectfully asks the Examiner to withdraw the rejection of claim 6.

Claim 9, recites:

determining optimal tuner power consumption from knowledge of the signals being processed by the tuner; and  
adjusting the tuner power consumption in accordance with said determining step, wherein said adjusting step includes the step of adjusting power consumption of certain tuner components within said tuner to achieve a desired intercept point for each component of said certain tuner components.

Accordingly, the invention of claim 9 provides for determining optimal tuner power consumption from knowledge of signals being processed and adjusting the tuner power consumption in accordance with the determined optimal tuner power consumption. As demonstrated with respect to claim 32, the combination proposed by the Examiner does not teach adjusting the tuner power consumption based upon knowledge of the signals being processed. Instead, the combination proposed determines a power consumption level based upon an analysis of a receiver's output signal. Thus, the combination does not teach all of the limitations of claim 9.

In addition, claim 9 recites "determining optimal tuner power consumption from knowledge of the signals being processed by the tuner." The Examiner concedes that *Caporizzo* fails to teach this limitation, but then fails to demonstrate how the proposed combination would teach or suggest this limitation. The Applicant respectfully submits that

this omission alone shows that the Current Action has failed to establish a prima facie case, but further submits that the combination does not teach or suggest this limitation. The Current Action relies on *Ciccarelli* to teach the adjustment of power consumption levels. However, this adjustment is lowers the performance characteristics (and thus power consumption) to the lowest level that still produces an output signal with the appropriate linearity. Nothing about this adjustment finds an “optimal tuner power consumption,” further, the adjustment is made in relation to the output signal, not the signals being processed. Therefore, the Current Action has failed to establish a prima facie case for rejecting claim 9, and the Applicant respectfully asks the Examiner to withdraw the rejection.

Claim 18 recites:

a circuit for determining acceptable tuner power consumption from knowledge of the signals being processed by the tuner; and  
at least one circuit for adjusting the tuner power consumption in accordance with said determining circuit, wherein said adjusting circuit adjusts the power consumption of certain tuner components within said tuner.

Accordingly, the invention of claim 18 provides for determining acceptable tuner power consumption from knowledge of signals being processed and adjusting the tuner power consumption in accordance with the determined optimal tuner power consumption. As demonstrated with respect to claim 32, the combination proposed by the Examiner does not teach adjusting the tuner power consumption based upon knowledge of the signals being processed. Instead, the combination the Examiner proposes, determines a power consumption level based upon an analysis of a receiver's output signal. Thus, the combination does not teach all of the limitations of claim 18. The Applicant respectfully asks the Examiner to withdraw the rejection of claim 18 as well.

Claim 26 recites:

circuitry for determining desired power consumption of certain tuner components from knowledge of signals being processed by the tuner; and  
circuitry operable in cooperation with said determining circuitry for adjusting the power consumption of said certain tuner components to achieve a desired component intercept point.

Accordingly, the invention of claim 26 provides for determining desired power consumption of certain tuner components from knowledge of signals being processed and adjusting the power consumption of the tuner components to achieve a desired component intercept point. As demonstrated with respect to claim 32, the combination proposed by the Examiner does not teach adjusting the tuner power consumption based upon knowledge of the signals being processed. Instead, the combination the Examiner proposes, determines a power consumption level based upon an analysis of a receiver's output signal. Thus, the combination does not teach all of the limitations of claim 26, and fails to establish a prima facie case for rejecting it. The Applicant respectfully asks the Examiner to withdraw the rejection of claim 26 as well.

### 3. The Dependent Claims

Each of claims 3-6, 8, 10-13, 15-17, 19-22, 24, 25, 27, 29-31, and 33-37 depend directly or indirectly from claim 1, 6, 9, 18, 26, and 32. Although each of claims 3-6, 8, 10-13, 15-17, 19-22, 24, 25, 27, 29-31, and 33-37 recite limitations that make it patentable in its own right, each is patentable because it inherits limitations from its respective base claim that, as demonstrated above, are neither taught nor suggested by the proposed combination of *Caporizzo* and *Ciccarelli*. Thus each of claims 3-6, 8, 10-13, 15-17, 19-22, 24, 25, 27, 29-31, and 33-37 is patentable over the proposed combination and the Applicant respectfully asks the Examiner to withdraw the rejections of record to the dependent claims.

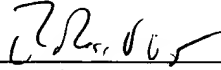
### III. Conclusion

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge Deposit Account No. 06-2380, under Order No. 49581/P016US/09806411 from which the undersigned is authorized to draw.

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Respectfully submitted,

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